Claims

1. A method of determining the invasivity of malignant disorders comprising measuring the expression of at least one gene selected from the group consisting of AXL, GAS, MMP14, ADAM12, ADAM17, MT3MMP, FGF2, FGF5, FYN, LYN, DDR2, TIMP1, HB-EGF, SGF, S6KII, MAP4K4, SIRPα, Annexin 2, Stat 5b and EDG2 wherein a high expression correlates with a high invasivity.

2. The method of claim 1, comprising measuring the expression of at least two genes selected from said group.

3. The method of claims 1 or 2 comprising measuring the expression of at least the AXL gene.

4. The method of any one of claims 1 - 3, wherein the malignant disorder is cancer, particularly selected from breast cancer, prostate cancer, kidney cancer, lung cancer, colon cancer, glioblastomas and other cancers.

5. The method of claim 4, wherein the cancer is glioblastomas.

6. The method of any one of claims 1-5, wherein the expression is determined on the mRNA level.

7. The method of claim 6, wherein the expression is determined on a nucleic acid array.

8. The method of any one of claims 1-5, wherein the expression is determined on the protein level.

9. The method of claim 8, wherein the expression is determined by an immunoassay.

10. A method of reducing the invasivity of malignant disorders comprising inhibiting the AXL gene expression and/or AXL ligand gene expression and/or protein function and/or protein ligand function.

11. The method of claim 10, wherein the AXL protein ligand is GAS6.

12. The method of claim 10 comprising inhibiting the receptor tyrosine kinase activity of the AXL protein.

13. The method of claim 10 comprising inhibiting the expression of the AXL gene.

14. The method of claim 10 comprising inhibiting the interaction between the AXL protein and its ligands.

15. The method of any one of claims 10-14 comprising the administration of an inhibitor of the AXL gene, AXL ligand gene, AXL protein and/or AXL protein ligand in an amount which is effective of reducing the invasivity of malignant disorders to a subject in need thereof.

16. The method of claim 15, wherein the malignant disorder is cancer, particularly selected from breast cancer, prostate cancer, kidney cancer, lung cancer, colon cancer, glioblastomas and other cancers.

17. The method of claim 16, wherein the cancer is glioblastomas.

18. The method of any one of claims 15-17, wherein the subject is a mammal, particularly a human.

19. The method of any one of claims 15-18, wherein the inhibitor is an antibody directed against the AXL protein.

20. The method of any one of claims 15-18, wherein the inhibitor is an antisense nucleic acid, a ribozyme or an RNA interference molecule directed against the AXL gene or a transcript thereof.

21. The method of any one of claims 15-18, wherein the inhibitor is a dominant-negative mutant of the AXL gene.

22. A pharmaceutical composition comprising as an active agent an inhibitor of the AXL gene, AXL ligand gene, AXL protein and/or AXL protein ligand together with pharmacologically active diluents, carriers and/or adjuvants.

23. The composition of claim 22, wherein the inhibitor is an antibody directed against the AXL protein.

24. The composition of claim 22, wherein the inhibitor is an antisense nucleic acid, a ribozyme or an RNA interference molecule directed against the AXL gene or a transcript thereof.

25. The composition of claim 22, wherein the inhibitor is a dominant-negative mutant of the AXL gene.

26. The composition of any one of claims 22-25 for reducing the invasivity of malignant disorders.

27. The composition of any one of claims 22-26 for reducing the metastasis formation in malignant disorders.

28. The composition of claims 26 or 27, wherein the malignant disorder is glioblastomas.

29. The composition of any one of claims 22-26 comprising at least one further active agent.

30. The composition of claim 29, wherein the further active agent is a cytotoxic or cytostatic agent.

31. A method of identifying and/or characterizing an inhibitor of the invasivity of malignant disorders comprising determining, if a test compound is capable of inhibiting the AXL gene, AXL ligand gene, AXL protein and/or AXL protein ligand.

32. The method of claim 31 comprising determining, if a test compound is capable of binding to the AXL protein and/or reducing the AXL gene expression.

33. The method of claim 31 or 32, wherein a cell-based assay system is used.

34. The method of claim 31 or 32, wherein a cell-free assay system is used.